REMARKS

Claims 1-20 are pending. Reconsideration in view of the following remarks is respectfully requested.

Claims 1-19 were rejected under 35 U.S.C. §102(e) over Nishi (U.S. Patent Application Publication 2001/0010579 A1). The rejection is respectfully traversed.

Figure 1 was objected to. The objection is respectfully traversed.

As disclosed, for example, in paragraphs [0020] and [0024], Figure 1 schematically depicts a lithographic projection apparatus according to an embodiment of the invention.

Reconsideration and withdrawal of the objection to Figure 1 are respectfully requested.

Claims 1-20 were rejected under 35 U.S.C. § 102(e) over Nishi (U.S. Patent Application Publication 2001/0010579 A1). The rejection is respectfully traversed.

It is respectfully submitted that the Examiner's conclusion that the temperature at which the coefficient of thermal expansion (CTE) of ZERODUR crosses zero and the mean operation temperature is going to be the same for all ZERODUR is incorrect. As clearly disclosed, for example, in paragraph [0010] of the specification, ZERODUR is a commercially available glass ceramic material made with various additives to provide a desired low coefficient of thermal expansion (CTE). Applicants further disclose that the CTE is exactly zero at only one temperature so that some thermal expansion and contraction does take place, leading to surface deformations and loss of image quality.

As further disclosed, for example, in paragraphs [0030] – [0033], according to the present invention, a component may be manufactured from a material having a coefficient of thermal expansion having a zero-crossing at a temperature between a manufacturing temperature and a mean operating temperature of the component. As also disclosed, for example, in paragraph [0039], according to the present invention, the coefficient of thermal expansion zero-crossing temperature can be selected by appropriate control of the additives and/or the manufacturing process.

With respect to the Examiner's request that Applicant provide support for conventional manufacturing methods or temperatures of ZERODUR compared to Applicant's method, it is respectfully submitted that Applicant has already done so. In the March 4, 2003 Information Disclosure Statement filed in parent application 10/307, 485, Applicant submitted Abstract No. XP-002198457, which was cited in the European Search Report of the European priority Application. A copy of Abstract No. XP-002198457 is attached for the

Examiner's convenience. It is also respectfully noted that Abstract No. XP-002198457 was considered by the Examiner in parent application 10/307,485, and in the instant application.

As clearly disclosed in Abstract No. XP-002198457, "zero expansion" material, such as ZERODUR, is manufactured by combining a negative thermal expansion coefficient crystalline phase with a positive coefficient amorphous phase in such proportions as to result in an expansion coefficient of almost zero over a large temperature interval. As also disclosed in Abstract No. XP-002198457, by design these materials typically exhibit a change in the sign (i.e. a zero-crossing) of the coefficient of linear thermal expansion near room temperature.

Applicant claims, however, a material having a coefficient of thermal expansion having a zero-crossing at a first temperature which is between a second (manufacturing) temperature and a mean operating temperature. There is no disclosure or suggestion by any of the prior art of record, including Nishi and Abstract No. XP-002198457, of such a feature.

It is respectfully submitted that the pending claims are not in any way limited to the use of ZERODUR. The pending claims cover any material having a CTE having a zero-crossing temperature at a first temperature that is between the second, manufacturing temperature and a mean operating temperature.

With respect to the Examiner's assertions that product by process claims are not limited to the manipulation of the recited steps, it is respectfully noted that Applicant is not claiming a product by process. Claim 1 recites to a method of manufacturing a component. Claim 8 recites a component having a coefficient of thermal expansion (CTE) having a zero-crossing at a first temperature that is between the second, manufacturing temperature and a mean operating temperature. The CTE of a material is a physical property, similar to any other physical property such as density, Young's modulus, Poisson's ratio, specific heat, Abbe factor, refractive index, etc. The CTE of the material is not a product by process limitation.

Reconsideration and withdrawal of the rejection of claims 1-20 over Nishi are respectfully requested.

In view of the above amendments and remarks, Applicant respectfully submits that all the claims are allowable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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Attachment: Abstract No. XP-002198547